

The Ethical Significance of (Mathematically) Engaging with Students and Teachers while Collecting Qualitative Data

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Abstract: Qualitative research in education is organized and conducted around knowing something specific about teaching and learning: it is conducted in the search of knowledge. This attitude, LÉVINAS explains, poses an ethical challenge because it reduces the otherness of the other to sameness and negates our fundamental relation of responsibility for the other: "knowledge is still and always solitude." Although scholars articulate the significance of such ethics for teaching and learning, it is yet to be conceptualized in the perspective of *conducting classroom research*. In this paper, we provide an exemplifying analysis of a classroom research episode (from our content area of mathematics) to renew the concept of *observing* through which going into the classroom and collecting data is realized in/as ethical responsibility for the students and the teachers.

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1. Introduction: Researching Alterity

"[W]ith regard to beings, understanding carries out an act of violence and of negation. A partial negation, which is violence. And this partialness can be described by the fact that, without disappearing, beings are in my power. The partial negation which is violence denies the independence of beings: they are mine" (LÉVINAS, 1998, p.9).¹

"In truth *interpretation* itself is a means to become master over something" (NIETZSCHE, 1954 [1856], p.489).

"The behavioural scientist cannot ignore the interaction between subject and observer in the hope that, if he but pretends long enough that it does not exist, it will just quietly go away" (DEVEREUX, 1967, p.xviii).

Conducting classroom observations in qualitative research inherently comes with questions about the role of researchers in relation to education and educational practices. Researchers then tend to appear as (controversial) authorities using observations to collect evidence for answering particular research questions and

1 All translations are ours.

make judgments about educational practice (e.g. WRAGG, 1994). In such a perspective, the ethical concerns commonly raised goes to the *planning* and the *use* of research, with issues such as informed consent, access to the research setting, non-maleficence, human dignity, confidentiality or researchers' obligations to various communities where "one has to consider how the research purposes, contents, methods, reporting and outcomes abide by ethical principles and practise" (COHEN, MANION & MORRISON, 2000, p.59). Research ethics then appears as a matter of right/wrong or good/bad decisions researchers make, should they be formulated in universalist or relativist terms, to ensure the acceptability of their observations and their results. [1]

On the other hand, the first introductory quotation problematizes observations in an unresolvable way, stating that *any* attempt to explain, to expound, to interpret or to understand constitute an act of violence because it negates beings. This negation is the result of substituting signs that we use when making present again (i.e., *represent*) human beings when they are actually absent: "the prosaic disincarnation in the conceptual schema is the first violence of all commentary" (DERRIDA, 1967, p.124). Rather than entering a relation with others, we replace them by a sign, and observation itself becomes problematic when considered as perception, that is "to take entirely" (from Latin *percipere*, to take possession of, apprehend, a composite from the intensifying *per-* and the verb *capere*, to grasp). Observing is already trying to seize the other, reduce the other to a manipulable/manageable object over which we gain control. As NIETZSCHE says in the second introductory quotation, interpretation, which seeks to understand the world, is an expression of the will to power over the world. Critical psychologists often make that point against researchers in the field of motivation psychology who find out how to get people (e.g., factory workers, students) do things that they would not do on their own (HOLZKAMP, 1983). In the third introductory quotation, the inherent relation between observer and observed is made thematic. This relation does not go away when institutional ethics boards sign off on a research project. More importantly, we develop a perspective in this paper where the researchers intervenes in the field to assist and transform learning opportunities, which, reflexively, become learning (observational) opportunities for the researcher (DEVEREUX, 1967). [2]

It is not surprising, then, that knowledge seeking is an expression of the human "will to power" over the world (NIETZSCHE, 1954 [1856]). This leads to an ethical predicament of research generally and mathematics education research more specifically. When researchers capture aspects of students and their (mathematical) understanding in their data to produce knowledge about them, there is an inherent act of violence, especially when this knowledge is used for institutional rearrangements that compel students to develop according to what educators deem important (DEVEREUX, 1967). If we are serious about this ethical impossibility, thinking ethics in the context of classroom research leads us to reflect on the very foundation our field of activity in ways that *exceed* common ethical principles and practice because observing simply "cannot be right." "Possessing" the other in knowing poses an ethical problem because it constitutes an enforcement of the Self that negates the otherness of the Other to whom we

are, however, in a fundamental relation of responsibility (for without the Other, there would be no Self) (LÉVINAS, 1982). The obsession with knowing the other makes us miss the ethical encounter, reducing the otherness of the Other to sameness; and what takes place is subsumed to what is already known. Being ethical in the face of students or teachers requires disrupting the Self and responding to these unknowable Others which is not compatible with the project of observing them: we needed an attitude by which sociality, our ontological relation with others, can take place. Thus, even from a phenomenological perspective which does not separate the perceiver from the perceived, LÉVINAS notes:

"I do not know if we can speak of 'phenomenology' ... because phenomenology describes what appears ... the gaze is knowing, perception. ... It is when you see a nose, the eyes, a forehead, a chin, and you can describe them that you turn towards others like towards an object. The best way to encounter others is to not even notice the colors of their eyes. When we observe the color of the eyes, one is not in a social relation with others" (p.89). [3]

The ethical problem introduced here is thus of a very different nature than that overseen by institutional ethics boards and committees, who generally consider applications in terms of conducting classroom research. Such a distinction sets apart deliberative ethics and ethical know-how (VARELA, 1999), which concerns the fundamental relation of the Self with the Other rather than the deontological praxis that philosophers, including I. KANT and J. RAWLS, have theorized. Our intention in this article is to contribute to an ongoing development of qualitative research ethics by bringing forth this unattended aspect of classroom research, very different in its nature from considerations on researchers' institutionalized accountability. With a focus on the concrete act of observing rather than reflecting on organizational position differentials (e.g. researchers as "authoritative figures" dealing with other "representatives" of the educational world such as students, teachers, peers, or administrators) where the researcher's intentions are central, we address *observing* from a LÉVINASian ethics that is not grounded in rationality and applied to practical action, but rather a relation with the other whereby we are always already placed in an obligation:

"from the moment the other looks at me, I am responsible, without even having to *take* responsibility towards him/her; his/her responsibility *lies* upon me. It is a responsibility which goes beyond what I do. ... Responsibility is initially *for the other*" (LÉVINAS, 1982, p.102). [4]

There have been attempts to come to grips with the relation between observers and observed, especially, the anxieties involved that "produce distortions" and that "any effective behavioural science methodology must treat" (DEVEREUX, 1967, p.xvii), our take is different because the observer becomes an active contributor to the situation observed. Although scholars have begun to articulate the significance of such ethics for teaching and learning by drawing on the work of LÉVINAS (e.g., NEYLAND, 2001; TODD, 2003; EGÉA-KUEHNE, 2008) it is yet to be conceptualized in the perspective of conducting classroom research. In the context of cogenerative dialogue, opening to such a change can be observed

in the pages of this journal (e.g., EMDIN & LEHNER, 2006; SCANTLEBURY & LaVAN, 2006; STITH & ROTH, 2006). But more broadly, may classroom research, with its endeavor to "observe" take a route different than that of merely wanting to gain control, and rather demonstrate ethical responsibility for the other in the way LÉVINAS conceptualizes it? [5]

M. BAKHTIN's ethics, in many ways similar to LÉVINAS (e.g. ROTH, 2009, in press; NEALON, 1997), gives us a means for considering and going about making observations in the course of research in an ethically grounded way. For BAKHTIN, each "act of our activity is like a two-faced Janus. It looks in two opposite directions: it looks at the objective unity of a domain of culture [i.e., knowledge] and at the never-repeatable uniqueness of actually lived and experienced life" (BAKHTIN, 1993, p.2). This means that in observing, one is never only noticing and interpreting, but also accountably realizing a unique moment of being in social relation with others. Preoccupied with making observations, education researchers tend to focus on the knowledge part of this dialectic, using special *methods* to make certain their claims are defensible. In so doing, they tend to forget that in and through their research, they contribute to and change the entire "world-as-event," to use BAKHTIN's terminology. Fulfilling ethical requirements of institutional research ethics boards and national funding organizations is only the technical, rational, content-related side of research as act. But "the irreproachable technical correctness of a performed act does not yet decide the matter of its moral value" (p.4). For education researchers to unify the two-sided answerability—both for its content and for its Being—coming to understand through research has to be the result of contributing to the collective responsibility for teaching and learning. [6]

Such a model of mutual responsibility can be found in coteaching, for example, if the researcher teaches alongside the regular teacher to increase the resources for teaching and learning (ROTH, 2002; ROTH, TOBIN, ZIMMERMANN, BRYANT & DAVIS, 2002). In this case, the potential benefits of the Other—students learn mathematics, teachers learn content and content pedagogical knowledge—precedes and is the practical basis of researchers' own increasing understanding. The purpose of coteaching, paired with the praxis of cogenerative dialoguing that also involves students in discussing classroom events (ROTH, LAWLESS & TOBIN, 2000; ROTH & TOBIN, 2002; TOBIN & ROTH, 2006), is the generation of actions and possibilities for future action that are in the *common* interest, that is, in the interest of *all* and severed from the primary need to produce knowledge *about* the Other. [7]

The act of observing conducted for the purpose of research is "one of all those acts which make up my whole once-occurrent life as an uninterrupted performing of acts" (BAKHTIN, 1993, p.3). As "every act or deed that I perform," research observation is an "individually answerable act or deed" (p.3). The foregoing considerations lead us well on the way toward a re/conceptualization of *observation* in qualitative research that is much closer to the etymological origin of the English verb, which is the Latin *observāre*, to watch over, to keep safe. Participating in an activity does not itself prevent the violence of perception, quite

the opposite. As RICŒUR (1994, p.16) explains, "there are numerous kinds of violence, including extremely soft forms of influence, for example, in teaching (which can be very possessive)." Thus, attention must be given to what plays and plays out in the concrete moment of "participative observation" so that the act of observing actually unfolds as a form of sociality: the always possible encounter with the Other in his/her unknowable otherness. [8]

In the following sections of this article, we conceptualize the ethical significance of (mathematically) engaging with students and teachers while also collecting data for the purpose of research. To do so, we provide an exemplifying analysis of a vignette from our classroom research in elementary school geometry in which a researcher steps in, which leads the lesson (and further lessons) into an unforeseen direction. As a result, we develop a refreshed, etymologically inspired understanding of *observing* through which going in the classroom and collecting data is realized in/as an ethical responsibility for the students and the teachers. [9]

2. The Intervention

Research that is in the interest of those involved, for example, students and teachers, immediately contributes to increasing the opportunities for teaching and learning. In this section, we present an episode that shows how this might occur. This episode then serves us as an example to further develop a different form of research ethics. The episode takes place in a second grade classroom, where students and teachers currently discuss the differences between a rectangular prism and a cube (a distinction that came up at the end of the previous week while exploring 3-dimensional objects). One of the two teachers (Rachel and Tara) leading the lesson presents different boxes and geometrical solids, asking the student how they can be described. Chris raises his hand, come in front of the classroom, and manipulate a pizza box explaining how "this one is more like a rectangular prism because ... its like a flat cube." Everything seems to unfold as we might expect it to do in any second-grade lesson (beside the fact it is organized around students' observations and contributions, and co-taught by Rachel and Tara), when suddenly someone else takes part in the conversation: It is Michael, one of the researchers and co-author of this paper, who is standing at the time at the periphery of the classroom holding a camcorder to record the lesson (Figure 1).

- 1 Rachel: so that makes it a rectangular prism as opposed to a cube, because if it was a cube what would it have to have ... what would that box have to have to be a cube
- 2 Chris: it would have to, hum, that or this ... like the kinda like ... square here and here like rectangle ... but on this one, it just has squares, here and here and everywhere
- 3 Michael: how could you make a cube from pizza boxes
- 4 Chris: hum ... i dont know
- 5 Tara: whose got an idea how could you, what would we need to do to make

- this pizza box into a [cube]
- 6 Rachel: [in order] to make this into a cube what would we need to do to it
- 7 Chris: take a whole bunch and stack them on top
- 8 Tara: in order to do what
- 9 Chris: in order to make it square



Figure 1: Artistic rendering of the classroom conversation, with Chris standing at the front and left and Michael situated in the far back to the right, holding his camcorder [10]

Chris and Rachel offer an explanation as to how and why a pizza box is different from a cube when Michael steps in the conversation, saying "how could you make a cube from pizza boxes," an utterance the student turns into a question addressed to him by saying "I don't know" (Turns 3–4). This is not the first, nor will it have been the last time that a researcher comes forth and engages with the participants during this research project. And, as we can see it here, the effect of the intervention is far from "benign" but has consequences for how the lesson unfolds. The question of how to "make a cube from pizza boxes" (Turn 3) will take up a significant part of the lesson, and will even develop into yet another lesson, in which the students explore the various hypotheses and strategies they discuss on that day following Michael's intervention. [11]

In this instance, the question actually leads to forms of public thinking that might otherwise not have come about. Conceptually, the students are in the process of learning the difference between three-dimensional shapes, which, according to one theory of the development of geometrical knowledge (VAN HIELE, 1986), may yet be too advanced for second graders. However, in and through this question, students are challenged to think and argue about the relationship between *this* pizza box—obviously a rectangular prism and not a cube—and a cube. "How *could* you make a cube from pizza boxes?" Although he first whispers "I don't know," Chris then comes up with a response when Tara has rephrased

the question. "Take a whole bunch and stack them on top," he says, and gestures the vertical expansion with his hands and arms. Later other students contribute to the conversation until, eventually, one of them provides a specification of how many pizza boxes it would take. She first measures the height of the pizza box using a caliper configuration of her thumb and index finger, then counts how many times this distance it takes to get across the top of the box, and suggests that this count will tell you how many boxes are needed. Here, then, a very sophisticated conversation about making a cube from pizza boxes has evolved, initiated by the question of a researcher who has stepped in and contributed to the whole class conversation. The researcher's contribution thereby is associated with a non-negligible turn in this classroom conversation specifically and contributed to student learning more generally (especially because of his repeated interventions). Moreover, his intervention opened up the mathematical activity so that the students could (safely) expose their ideas, so that mathematically knowing the pizza box and rectangular prisms takes to form of a witnessable *relation* involving all those in presence. [12]

This short example thus brings to the fore the very aspect current research on *ethics* in mathematics education has been emphasizing: the ethical dimension of engaging in and producing an activity with others. This ethical dimension is recognizable in moments such as when a teacher tries to intimate new ways of attending (RADFORD & ROTH, 2011), when a student adopts such a new way of doing, and in fact in any instant of "knowing" because knowing is always knowing-with (MAHEUX & ROTH, submitted-a). We see Michael, a well-known researcher in his field and local community, joining a classroom with his research gears and not only *de facto* transform its usual setting by his sole presence (e.g., DEVEREUX, 1967), but also explicitly contribute to the unfolding of the lesson he is videotaping. A brief contribution ("how could you make a cube from pizza boxes") which certainly could be analyzed from a traditional perspective on ethics, asking for example how his status might have played into his decision to speak up, in the teachers' and students' compulsion to take on his proposition, or on how he might deal with his accountability towards his institutional ethics board, publishing committees, eventual readers, for the perturbation he introduced in the data. But rather than thinking about such perturbation as a limitation of method, we take it "as the most significant and characteristic data of [our] behavioral research" (p.xv). Thus, this is an intervention that we want to consider from the particular point of view a LÉVINASian ethics because it can bring an interesting aspect to the question of observing. What exactly is this ethical dimension and how does it play out in terms of observing while conducting research in education? One way of addressing this question exists in examining the above vignette to find out what makes it possible for Michael and Chris to produce the question/answer turns they do, and the ethical significance of their relation in/as an instance of (mathematically) engaging with students and teachers when collecting data. [13]

3. How Can Such a Question be Asked/Answered?

Michael's utterance suggests a specific attention to what is happening between Chris and Rachel and the rest of the classroom: His intervention "makes sense" as part of exploring differences between a rectangular prism and a cube from a second-grade geometry lesson, while at the same time pushes it into a new direction. Up to that point, the participants discussed properties of solids, whereas Michael's intervention opens up the conversation to consider possible transformations and measurement. The lesson is at the verge of a transformation, and Chris' reaction to Michael's contribution makes a step forward in this direction. When a student says "I don't know," it presupposes the relevance of what this student is answering to, and sets up the conversation for knowing-with his/her interlocutor in the manner staged by the question (MAHEUX & ROTH, submitted-a). Picking up the conversation at this point and moving it forward by inviting other students to contribute, the teachers (Tara and Rachel, Turn 5–6), followed by the students, continue this change initiated by the researcher's intervention. [14]

Sociality is the always-possible encounter with the Other (in his/her unknowable otherness), "a form of leaving being other than by way of knowledge" (LÉVINAS, 1982, p.61). In the fragment we introduced, reading it in the way we do, becomes visible mutual attunement, joined attention and contributions to the activity at hand. If Michael's question is not in tune enough with the classroom (level of) conversation, it would not be possible for Chris to present himself as not knowing on the issue. For example, if Michael rather said "From a topological perspective, are not all parallelepiped hexahedron identical?" or "Why not use CAVALLIERI's idea and explore the relation between a cube and one of its cross-section region?," it is unlikely that the contribution would have been taken up in the conversation and, thereby, become part of the dialogical development of this classroom geometrical activity. [15]

Michael's utterance is, in fact, not a beginning but already a *response* to what is taking place in this classroom as a whole as much as to what Rachel and Chris are articulating. This is so because "what one begins to say already is a response" (DERRIDA, 1967, p.23); every act of speaking is, and from the beginning of language has been, a response (CHRÉTIEN, 2007). Responding is possible because Michael has opened himself up to be affected, to *receive*, making room for the unknown, the unexpected. He is *listening-to*, which we consider distinct from the *listening-for* that often characterizes teaching (KIEREN, 1995), and researching. In the latter case attentiveness is made thematic, and the observer is looking for something already known, something recognizable in what is *said*, whereas in the former case, it is the speaker and her *saying* which matters in terms of the actual situation/conversation. This distinction between attending to the Saying (*le Dire*) and the Said (*le Dit*) is one of the keystones of ethics as we conceptualize it here following LÉVINAS and BAKHTIN, for "a neutral position in relation to *I* and *another* is impossible in the living image and in the ethical idea" (BAKHTIN, 1984). Ethics in the making is assuming a responsive attitude towards the Other in which understanding the Other means to *orient*

oneself with respect to what he/she offers (BAKHTIN, 1986). The Saying then, in its responsiveness, is what accomplishes and maintains the relation with the other, the neighbor, a relation of responsibility *for* the other at the very foundation of ethics because

"responsibility is the first, essential and fundamental structure of subjectivity. It is in terms of ethics that I describe subjectivity. Ethics is not an addition to pre-existing selves; it is in ethics as responsibility that the nod of subjectivity is tied" (LÉVINAS, 1982, pp.101-103). [16]

Michael's response to what is taking place is also a Saying: It is an *offering* of himself. At this instant, he could have remained at distant remove, being in the classroom little more than a fly on the wall. But we find Michael doing much more than that: exposed to the unfolding of the lesson, he responds to the conversation, to Rachel and Chris, making available yet another way of considering relations and distinctions between solids. He collaborates (from the Latin *com-*, with, together + *labōrāre*, to work), working-with the teachers and the students for geometry to emerge as that praxis that this lesson realizes (ROTH, 2011). In opposition to not interfering with the lesson, Michael's attitude here speaks to LÉVINAS's and BAKHTIN's conceptualization of ethics, as the act of research is a form of relation taking place between the researcher and the participant in his data collection. Rachel, Chris, and everyone else present in this classroom are not mere objects in interactions he came to "capture on camera" and *about* whom he wants to develop an understanding: They are first and foremost human beings *with* whom a geometry lesson is coming together. In his Saying, he already exhibits an irreducible responsibility for the other, constitutive of one and the other's selves and otherness as human being: "The saying is a manner of greeting others, but to greet others is already answering *for* him" (LÉVINAS, 1982, p.82; emphasis added). Addressing them, offering (geometry) in a response is thus confirming (acknowledging and strengthening) the fundamental relation of responsibility by means of which he and they are existing as human beings. [17]

Classroom research can thereby realize itself as an ethical endeavor, as a way to open ourselves to the otherness of students and teachers while fostering (e.g. mathematics) education to unfold in a particular way. This is where LÉVINAS's farsightedness about knowledge becomes once again fundamental:

"Knowledge is always adequation between thought and what it thinks. In the final account, there is in knowledge an impossibility of leaving self; therefore, sociality cannot have the same structure as knowledge Knowledge has always been interpreted as assimilation. Even the most spectacular discoveries end being absorbed, comprehended, with everything that goes with the 'prehend' in the comprehending. The most audacious and distant knowledge does not put us in communion with the real other; it does not replace sociality; it is still and always solitude ... where the Same dominates or absorbs or envelops the Other and of which knowledge is the model" (pp.61-63). [18]

If education research is organized and conducted around knowing something specific about teaching and learning, it seeks to establish an adequation between what the researcher wants to see and what is taking place, impeding the ethical possibility, sociality, to come forth. When research is conducted in pursuit of knowledge, it attempts to "prehend" the Other, framed by what is already known to learn something previously specified, argued for, and so on. This reduces teachers and students to something (to be) known, the fundamental otherness (the unknowable) which is condition for sociality, for being in relation with the other, tends to vanish. The observer closes upon him/herself, proceeds in "operational closure," and thus isolates his/her Self from the Other: "knowledge ... is still and always solitude." [19]

Ethics as a relation of responsibility for the Other, as the condition and the aim of sociality, of being-with and living-with, evokes a different attitude. Being ethical in face of students and teachers means disrupting the Self, a rupture from what is (to be) known, to what one could be listening-for, to allow responding to the unknowable Other. For this to take place, doing research can be thought of in terms of journeys where researchers are going out to *meet* the Other; and, traveling in their company for a while, they engage together in collecting data *and*, in our case, doing mathematics. More so, researchers are in a privilege position to affect teaching and learning, since researching itself transforms the activity and creates opportunities for "expansive learning" (ENGESTRÖM, 1987), that is a multiplication of action possibilities in the sense of what it means to teach or learn (e.g., mathematics, see MAHEUX & ROTH, submitted-b). This appears to be of particular importance, considering how teaching and learning can itself be thought of and realized with a central attention on knowledge (should it be in the transmissive project of getting knowledge to the students, or in the constructivist scheme of getting the student to the knowledge) rather than relations. [20]

4. A Renewed Conceptualization of Observing

Current research on ethics in mathematics education emphasizes the doing of mathematics as engaging in and producing an activity with others that affects all participants. This ethical dimension also plays out in the process of doing (mathematics) education research. In this paper we re/write the concept of *observing*: it is a way to conceptualize the ethical significance of (mathematically) engaging with students and teachers while collecting data. That is, rather than avoiding the entanglement of researcher and researched—a case of *countertransference* (DEVEREUX, 1967)—our approach increases the entanglement by having researchers *actively* engage with the researched and, thereby, becoming an observational object themselves. This is consistent with current discussions of countertransference, which articulate it as a way to understand transference (GRANT & CRAWLEY, 2002). The concept of observing is traditionally used as a means to separate the subject and the transitive object of observation. This separation is grammatically instantiated in such statements as "the researcher observes the student," where the researcher is the agential subject and the student appears in the accusative/objective case, the recipient of

the transitive verb. Even in enactivist theory the observer is conceptualized in terms of "making distinctions," that is the observer

"specifies a unity as an entity distinct from a background and a background as the domain in which an entity is distinguished. An operation of distinction, however, is also a prescription of a procedure which, if carried out, severs a unity from a background, regardless of the procedure of distinction and regardless of whether the procedure is carried out by an observer or by another entity" (MATURANA & VARELA, 1980, p.xxii). [21]

Thus, although enactivist theory conceptualizes the relation of self and other as "structural coupling" where every human act takes place in a language constitutive of the human world, giving it an intrinsically ethical meaning because it "brings forth a world created with others in the act of coexistence" (MATURANA & VARELA, 1998, p.247), this perspective is problematic because it places the other in the objective and thereby objectified case. [22]

LÉVINASian ethics is different because it acknowledges the otherness of the Self, which, therefore, is not self-identical. Without such a Self-Other structure, where the self is already Other to itself, it would not be possible to encounter anything radically new, and thus be in relation with what is other. Most importantly, we would be unable to experience empathy and sympathy (FRANCK, 1981). Thus, we would not be able to understand the affect (affective states) the ongoing lesson has (e.g. on affecting students), unless we were able to see it in the other, which implies that our seeing itself is already other from self. It is for this reason that

"I cannot identify the behavior of the other as choleric without adopting at first an exterior point of view over my own affects, that is, from this other himself. Only under this condition can I understand this carnal manifestation of another as choleric" (p.157). [23]

As observers, we could not know anything of/about ourselves if we were not already able to see and describe it as existing in the Other. This means that observation in classroom research is not essentially a procedure by means of which we "sever a unity from a background," and, for example, attend to a student's talk or gestures. Observing means a prior *relation*, which is the condition for any kind of distinction to be made, a relation which, if made thematic, takes us back into the realm of knowledge: The relation with the Other "may certainly be dominated by perception," but what is specifically ethical is "that which cannot be reduced to it" (LÉVINAS, 1982, p.89). [24]

We offer here an ethically grounded alternative to the concept of *observing* as watching over, keeping safe. When Michael, a researcher standing up in the classroom with his camcorder, steps forward and mathematically engages the students, observing in this manner is exhibited. In fact, in this stepping forward and engaging students mathematically, Michael may be looking and looking forward—but not because of knowledge interest. Here it is the relation to others

and their development as mathematical beings. Because any higher psychological function *is* a societal relation (VYGOTSKIJ, 2005), students come to participate in forms of reasoning that others attribute to them at some later point in time: students seem to have *appropriated* these psychological functions from others in the relation. It is in the form of the relation that Michael's utterance has set off that mathematics exists. Michael thereby demonstrates, as shown in the previous section, attentiveness to the conversation as it realizes itself turn after turn, and to the activity to which it contributes as a whole. Watching over, even at some distance, Michael demonstrates an ethics of responsibility for the Other in what is taking place in and as an act of doing research. Precisely because he researches the teaching and learning of *mathematics*, that is, the emergence of particular relations involving teachers and students (MAHEUX & ROTH, 2011), he can make a mathematical contribution to the situation, realizing it as a collective enterprise towards which, through his responsibility for the students and teachers, he is accountable. Engaging with the residents of this place, regardless of how it may affect "what" can be learned about it (from the perspective of research), is to go beyond perception and make room to what cannot be reduced to some perceived "thing." It is keeping safe, maintaining the relation that comes before and (in the words of RICŒUR) that is also the ultimate aim of observing as conceptualized from an ethical perspective. [25]

Sociocultural theories consider actions, including the act of knowing, as the founding process of the self, and always changing being-with-others. Actions, however, are not considered here from the perspective of the individual: *my* action, *your* action, *the researcher's* action. On the contrary, action, especially speech action, is always action-in-common, "sympractical" (BÜHLER, 1999 [1934]), it is always doing-with, knowing-with. Michael was not alone when his short utterance, "how could you make a cube from pizza boxes," became a question that transformed this geometry lesson and the followings. Neither was he in one of the many other occasion in which he questioned a student ("what are you finding here?"), drew teachers' attention to a student's contribution ("there was someone here with a different idea") or suddenly addressed the whole classroom ("did everybody get that? Everyone agrees?"). Being there and observing (instead of simply sending his camera with a tripod), the researcher exposed himself to all others and all others are similarly exposed to him or her. There is no way by means of which, using traditional views on the ethics of conducting classroom research, this exposure and the responsibility that comes with it can be "minimized" (even sending the tripod and camera could be examine in such way). [26]

In this article, we articulate the double dimension of research ethics in which, although the others' responsibility for me "is the other's business" (LÉVINAS, 1982, p.105), *I* am nevertheless responsible for the other's responsibility: "responsibility is initially *for the Other* [and] this means I am responsible of his/her very responsibility" (p.102). Being there in the classroom and observing, a researcher always already is in a situation of responsibility for the teacher and the students, and this responsibility is also a responsibility for the fact that inherently, teacher and the students are in turn responsible for him, for his presence and

observing. Conversation is paradigmatic of such a sympractical approach to ethics. When doing research in education is conceptualized and performed as an act of creating opportunities for conversations, not the staged production of utterances in which students or teachers articulate or demonstrate specific form of knowing, it overcomes the dominance of knowledge, it unfolds as an ethical act. [27]

5. Coda

In this article, we articulate a LÉVINASian perspective on classroom observation in qualitative research. This perspective makes thematic the relation with others and the problematic of observing for observation sake. Mere observation is a form of voyeurism that renders entire classrooms and specific participants into "objects of desire," which is not an intentional object toward which desire (to know) tends but the origin and cause of the desire (to know) (LACAN, 1966). Thus, observation, the gaze as desire, is not a relation to the (research) subject in objectified form but a relation to an absence, to a lack (of knowledge). We suggest that qualitative researchers live up to this ethical challenge, which is not and cannot be dealt with in/by successfully passing the requirements of institutional ethics boards. From this relation emerges not an "object of knowledge, but a this ... which constitutes my being and to which ... I bear witness" (p.526). The notion of witness leads us to a new form of ethics appropriate for classroom research, because it no longer objectifies the Other and the situation (ROTH, in press). [28]

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